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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,562	03/30/2004	Walton Fong	HSJ920030165US1 (0549)	4116

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EXAMINER

RODRIGUEZ, GLENDA P

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/813,562

Applicant(s)

FONG ET AL.

Examiner

Glenda P. Rodriguez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling. "Performing an initial burnish operation" is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Because this is a method claim, the claimed method must be disclosed in Applicant's Specification.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 4-7, 9-12, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan et al. (US Patent No. 7, 023, 632) in view of Haddock (US Patent No. 6, 707, 631).

Regarding Claim 1, Egan et al. teaches a method for minimizing the cycle time of a burnish test cycle, comprising:

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Measuring an initial MR resistance for a head (Col. 2, L. 14-40 and Col. 4, L. 30-40, wherein the read or MR/write head is being monitored for its clearance towards the disk surface. According to the Applicant's Specification in Page 5, L. 6-8, Page 8, L. 7-10 and Page 11, L. 9-14. See also Col. 5, L. 18-33 and Col. 6, L. , wherein it teaches taking measurements in order to determine if there is a high fly-write condition. It is obvious to a person of ordinary skill in the art, that in order to monitor a high-fly write condition, an initial value must be taken.);

Determining whether the measured MR resistance indicates the head has clearance (Col. 4, L. 60 to Col. 5, L. 33 and Col. 6, L. 50 to Col. 7, L. 9, wherein it teaches how the read heads detects the prevention of head to disk contact or PTP or clearance. Egan et al. also indicates if a high-fly write condition or undesired head to disk clearance, has occurred.);

And completing the test cycle when the head is determined to have clearance (See Col. 7, L. 46-50 and Fig. 7 and Col. 6, L. 50 to Col. 7, L. 9).

However, Egan et al. does not explicitly teach performing an initial burnishing operation. This limitation is taught by Haddock in Col. 2, L. 27-44. It would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify Egan et al.'s invention with the teaching of Haddock in order to be able to prevent head to disk contact by the act of burnishing the head as disclosed in the Abstract of Haddock.

Claim (6) has limitations similar to those treated in the above rejection, and is met by the references as discussed above. Claim (6) however also recites the following limitations: a memory for storing data therein (Element 136 which is a storage disk).

Program storage device claim (11) is drawn to the device corresponding to the method of using same as claimed in claim (1). Therefore program storage device claim (11) correspond to method claim (1), and is rejected for the same reasons of obviousness as used above.

Regarding Claims 2, 7 and 12, the combination of Eganb et al. and Haddock teach all the limitations of Claims 1, 6 and 11, respectively. The combination further teach wherein:

Reducing the fly-height of the head when the measured MR resistance indicates the head not to have clearance (See Col. 7, L. 31-62, wherein it teaches that when the read head detects transitions which indicate improper head to disk clearance or PTP, it proceeds to burnish the head. See also Fig. 6);

Perform a subsequent burnish operation (See Col. 7, L. 31-62, Step 76 and Fig. 6);

Measuring the MR resistance again (See Fig. 6, wherein after burnishing Step 76, it proceeds to verify if the transitions are still unacceptable in Step 70.);

And returning to determine whether the measured MR resistance indicates the head has clearance (See Fig. 6, Step 70 determines if the PTP or fly-height transitions are acceptable. See also Col. 7, L. 45-51).

Regarding Claim 4, 9 and 14, the combination of Egan et al. and Haddock teaches all the limitations of Claims 1, 6 and 11, respectively. The combination further teaches comparing the MR resistance to a threshold (See Fig. 6, Step 70, wherein the read of MR transition values are compared to a threshold, thereby indicating a PTP or an unacceptable fly-height.)

Regarding Claims 5, 10 and 15, the combination of Egan et al. and Haddock teaches all the limitations of Claims 1, 6 and 11, respectively. The combination further teaches comparing the rate of change (the term “rate of change” and resistance is the same according to the Applicant’s Specification in Page 14, L. 2-3. Hence, see Fig. 6, Step 70 and explanation of rejection to Claims 4, 9, and 14.).

5. Claims 3, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Egan et al. and Haddock as applied to claims 2, 7 and 12, respectively above, and further in view of Smith (US Patent No. 6, 417, 981). The combination teaches all the limitations of Claims 2, 7 and 12, respectively. However, the combination does not explicitly teach wherein reducing the speed. This limitation is taught by Smith in the Abstract. It would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the combination’s invention in order to measure the clearance between the head and the moving medium as taught by Smith in the Abstract.

#### ***Response to Arguments***

6. Applicant's arguments filed 09/06/06 have been fully considered but they are not persuasive. Applicant’s argue that Egan et al. does not teach measuring an initial MR resistance value. Examiner does not concur because Egan does teach in Col. 5, L. 3-33, Col. 6, L. 1-17, and Col. 7, L. 1-10 monitoring high fly write, which is analogous with head to disk clearance. It is obvious to a person of ordinary skill in the art that in order to monitor a high fly write operation you must take an initial value of your current fly height in order to know if the disk at that moment, is within normal bounds. Applicant also argues that Egan et al. does not teach failure to indicate if the disk has clearance. Examiner does not concur with the Applicant

because Egan et al. does teach a HFW or high fly write monitoring system in Col. 5, L. 3-33, Col. 6, L. 1-17, and Col. 7, L. 1-10 wherein if the disk has an abnormal fly height, it will be detected, otherwise, the test procedure can hence continue. Hence, Egan does acknowledge when the fly height is normal and also indicates when an abnormal fly height condition has occurred.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenda P. Rodriguez whose telephone number is (571) 272-7561. The examiner can normally be reached on Monday thru Thursday: 7:00-5:00; alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
gp/  
11/20/06.  
ANDREA WELLINGTON  
SUPERVISORY PATENT EXAMINER